



#### Darwin Initiative Annual Report

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be about 10 pages in length, excluding annexes

**Submission Deadline: 30 April** 

#### **Darwin Project Information**

| Project Reference   | DPLUS006  |
|---|---|
| Project Title   | Seed Conservation in the Caribbean UK Overseas Territories  |
| Host Country/ies  | Anguilla, Cayman Islands, Montserrat, British Virgin Islands, Turks and Caicos Islands  |
| Contract Holder Institution   | Royal Botanic Gardens Kew   |
| Partner institutions  | Anguilla Department of Environment, Cayman Islands Department of Environment, Montserrat Department of Environment, National Parks Trust of the Virgin Islands, Turks and Caicos Department of Environment and Maritime Affairs |
| Darwin Grant Value  | £95,755 (£39,113 – 2013/14)   |
| Start/end dates of project  | 1 July 2013 – 30 June 2015  |
| Reporting period (eg Apr 2013<br>– Mar 2014) and number (eg<br>Annual Report 1, 2, 3) | July 2013 – March 2014, Annual Report 1   |
| Project Leader name   | Thomas Heller   |
| Project website   | http://www.kew.org/discover/blogs/seed-conservation-<br>caribbean-uk-overseas-territories   |
| Report author(s) and date   | Thomas Heller [insert date]   |

#### **Abbreviations:**

TCI - Turks and Caicos Islands

DEMA – Department of Environment and Maritime Affairs (TCI)

BVI – British Virgin Islands

NPT - National Parks Trust of the Virgin Islands

CDoE - Cayman Department of Environment

MDoE – Montserrat Department of Environment

ADoE - Anguilla Department of Environment

MSB - Millennium Seed Bank at Wakehurst Place

MSBP - Millennium Seed Bank Partnership

FERA - Food & Environment Research Agency

#### 1. Project Rationale

The five Caribbean UKOTs are part of the Caribbean 'biodiversity hotspot' sensu Myers et al 2000, an international conservation priority. The main threats to the plant diversity are habitat loss and fragmentation and the spread of alien invasive species. Much of the destruction of native habitats is driven by development, e.g. the rapid proliferation of tourist resorts, road-building, urban developments. Many alien species are being introduced through the horticultural trade, threatening native vegetation. Climate change in the Caribbean is predicted to have increasing impacts.

Tourism is a major part of the economies of all of the Caribbean UKOTs. The natural environment is key to attracting visitors to the islands, as well as being vital in providing other ecosystem services, such as hydrology and erosion control.

In addition to being a valuable long-term 'insurance policy' against extinction, seed banks can support other conservation activities such as habitat restoration and landscaping with native species. The MSB holds 281 seed collections from the Caribbean UKOTs, none are banked locally. While some species are also represented in *ex-situ* collections (e.g. Kew and locally) as cultivated plants, these represent a small proportion of the threatened plant diversity of the UKOTs.

This project is taking place across all five of the Caribbean UK Overseas Territories: Anguilla, British Virgin Islands, Cayman Islands, Montserrat, and Turks and Caicos Islands.



#### 2. Project Partnerships

Effective collaboration is essential to the success of this project.

Kew has worked on plant conservation with all five partners in the past; long-standing relationships as well as existing formal partnerships have been invaluable for establishing this project, especially where seed conservation activities have previously taken place, such as in the Turks and Caicos Islands, British Virgin Islands and Cayman. New Memoranda of Collaboration have been agreed with partners in Montserrat, BVI and Anguilla, while Kew have existing agreements with partners in the TCI and Cayman.

Workplans covering the activities specific to the project were developed and agreed in collaboration with all five partners (Annex 4).

The Seed Conservation workshop, hosted in TCI by DEMA, was a great opportunity to build on the partnerships. As well as the training delivered by Kew staff, participants were able to meet counterparts from other UKOTs, for the first time in many cases, and share conservation experiences and scenarios relevant to this project. For example, Bryan Manco of DEMA was able to share his experiences of past seed collecting and extensive knowledge of the local flora, as well as show DEMA's Native Plants Nursery, which many found to be very useful inspiration with close links to seed conservation activities. The workshop is described in two reports, one by Thomas Heller (Project Leader) and another by Bryan Manco (DEMA) (Annex 5).

Another important area where partner input is important to the project is the development of a list of priority species for targeted collecting. The prioritisation of species with a narrow distribution and those not currently represented in MSBP accessions has been mutually agreed. Partners have been able to further refine the list according to local priorities. For example, NPT have identified a local need for native species for landscaping and wish to prioritise these species for seed banking in BVI; in Cayman, an existing Red Data list is helping to fine-tune the priorities at CDoE; in Anguilla, an initial short list of priorities for targeting has been drawn up; while in Montserrat, staff at MDoE have highlighted species familiar and of importance locally (Annex 6) .

A Google Group (<a href="https://groups.google.com/forum/?hl=en-GB#!forum/caribbean-ukots-seed-conservation">https://groups.google.com/forum/?hl=en-GB#!forum/caribbean-ukots-seed-conservation</a>) has been set up as a forum for project partners to communicate with each other, allowing information to be shared. The aim of this is to help develop a Caribbean UKOTs Seed Conservation network, and promote collaboration between UKOTs.

#### 3. Project Progress

The project commenced in July 2013, with Q2 and Q3 being dominated by preparations for the Seed Conservation Workshop in TCI; those partners with some pre-existing capacity for seed collecting continued to make collections where possible (e.g. DEMA in TCI and CDoE in Cayman). Q3 and Q4 saw UKOTs partners being equipped for collecting, processing and banking, where gaps remain; work on gathering data at Kew for the initial priority species list was undertaken; partners started/continued with collecting programmes and shipped duplicate collections to the MSB in the UK.

#### 3.1 Progress in carrying out project activities

#### **Output 1: Capacity building**

**Activity 1.1** Training was delivered during a successful seed conservation workshop in TCI during 21<sup>st</sup> to 25<sup>th</sup> October 2013, where all planned topics were covered. The workshop reports were produced by the Project Leader (Annex 5a) and Bryan Manco, DEMA (Annex 5b). A press release was produced in Anguilla by ADoE (Annex 5c), while a blog featuring the workshop was published on the Kew website: <a href="http://www.kew.org/discover/blogs/seed-conservation-caribbean-uk-overseas-territories">http://www.kew.org/discover/blogs/seed-conservation-caribbean-uk-overseas-territories</a>.

**Activity 1.2** Ideas for coordinated prioritisation of species were explored at the workshop, with consideration of those taxa with a restricted range, threatened species, those of local or cultural or economic value, and plants useful in habitat restoration or landscaping. The basis for developing the priority list was agreed. See workshop reports (Annexes 5a&b).

Activities 1.3 & 1.4 Equipment already available with partners, including items previously provided through the MSBP was reviewed through individual correspondence with partners. Equipment already supplied to partners includes silica gel drum dryer systems in TCI, Cayman, BVI and Montserrat, and a freezer already in place in BVI. Where equipment was still required, some was ordered and shipped from the MSB. These include seed collecting bags, silica gel drum dryers (to Anguilla), hygrometers, foil-laminate bags and clips, dissecting kits, cleaning sieves. Other items were ordered by Kew and delivered directly to partners, such as herbarium presses, or funds were provided to partners to purchase items locally (e.g. freezers). Freezers

have yet to be purchased in Anguilla, Montserrat and TCI, whilst space to accommodate them is finalised, though funds are in place. Heat sealers are on order with US supplier, awaiting stock to be replenished. See financial reporting.

**Activity 1.5** Most existing seed collections held in duplicate at the MSB are ready for repatriation, pending inspection and issue of phytosanitary certificates by FERA. A small number of collections require some additional processing before repatriation. These include collections from the British Virgin Islands, which were not split into duplicate portions at the time they were sent to the MSB. These are now being split, with the agreement of NPT. See list of MSB accessions from Caribbean UKOTs (Annex 7) for the full list.

#### **Output 2: Seed collecting programme**

**Activity 2.1** A provisional list of taxa found in the Caribbean UKOTs has been drawn up for this project, based on data held in Kew's UKOTs plant database and supplemented with information from the Flora of the West Indies (<a href="http://botany.si.edu/antilles/WestIndies/index.htm">http://botany.si.edu/antilles/WestIndies/index.htm</a>). These taxa have then been scored according to the extent of their range and whether they are already represented in MSBP accessions. The list of species, scored according to these criteria is available online at

https://drive.google.com/file/d/0B9U7YpPN14zXdIYxV3dQVC1qT3M/edit?usp=sharing, with an extract in Annex 6. Those that have a total score of 4 or above are considered as priority taxa for the purposes of this project. NPT have drawn up a list of native species of local value in landscaping, MDoE and ADoE have indicated subsets familiar and of importance locally, while CDoE wish to refine local priorities according to the Cayman National Red List. These local priorities have yet to be incorporated into the main project target list. Desiccation tolerance (and therefore suitability for banking) is another variable to be adequately incorporated into the list, but this will be done, drawing on available information from the Seed Information Database (http://data.kew.org/sid/).

Activity 2.2 Much of the data available for assisting with the targeting of species for seed collecting is now available on the OTEP-funded UKOTs online herbarium (<a href="http://herbaria.plants.ox.ac.uk/bol/ukot">http://herbaria.plants.ox.ac.uk/bol/ukot</a>), where a database of plant records from the UKOTs is available to query, including locality information, specimen and field images. More data will be uploaded to this site shortly, making this an invaluable resource for partners to target high priority species. Additional work in compiling information for targeting will be undertaken at Kew, particularly in those instances where data on the Online Herbarium is lacking, such as for Anguilla.

**Activity 2.3 & 2.4** Fieldwork is underway with all partners, with many making regular visits to the field to identify populations of target species and make collections. Approaches vary from partner to partner. In BVI and Montserrat, partners are making field visits on designated days of the week, while in Cayman, Anguilla and TCI field work is undertaken more flexibly in an effort to balance time with other commitments.

Both TCI and Anguilla have experienced an unusually long dry season, which has limited the availability of species in fruit.

In TCI, twelve collections have been made since the beginning of the project, including two endemic species, *Lepidium filicaule* and *Stenandrium carolinae*.

In Anguilla four species have been collected, including *Tabebuia pallida*, a species endemic to the Lesser Antilles.

In Cayman, eight collections of five species have been collected (Annex 8c).

Joint field work was undertaken by NPT and Kew staff in BVI in March 2014, with collections and data being made in parallel with the Darwin Plus-funded project "Conserving plant diversity and establishing ecosystem based approaches to the management of forest ecosystems in the British Virgin Islands" (DPLUS016). This proved to be very productive, with 28 seed collections made for this project, with another eight seed collections having been made by the NPT prior to the Kew visit. A detailed account of this joint work is presented in the report in Annex 8.

The MDoE in Montserrat have designated Mondays and Thursdays for seed collecting field work, and have made collections of three species and identified populations of 19 species for future targeted collecting, over five field trips.

To date, 63 seed collections have been made for the project (see list of seed collections, Annex 7). Herbarium specimens and data are collected at the same time as the seeds.

Reports of partners' activities at MDoE and CDoE are provided in Annex 8b & c.

Activity 2.5 Dry, clean and bank seeds. Seeds are cleaned either soon after collecting (in the case of wet-fruited species), or dried and then cleaned (dry-fruited species), using a variety of equipment available, including using sieves and rubber matting. NPT and CDoE are equipped with freezers, and so are able to bank seeds locally, after sealing the seeds in tri-laminate foil bags, using plastic clips (heat sealers will be used once available). Meanwhile partners in TCI and Montserrat are yet to install freezers, and so seed collections are dried and sealed in foil bags in preparation for cold storage. In Anguilla, there is a lack of space to carry out the seeds'preparation works and storage. For this reason, seeds collected and those that are to be collected will be shipped in their original state to the MSB for processing and storage. Efforts have been applied to securing the relevant space to carry out the works. The Executive Council Memorandum has already been prepared and to be shared with Executive Council for their approval. Once the appropriate space is sourced, the necessary retrofits will be done to allow for the pre-works and storage.

**Activity 2.6** 82 seed collections and their associated herbarium have been shipped to the MSB for the project to date (see list of MSB accession in Annex 7). This includes some 35 seed collections made in the months immediately prior to the formal start of the Darwin project, using co-funding already in place. The project has the use of the MSB's account with DHL, which allows for efficient transport of material to the UK. 16 seed collections have been made but have yet to be shipped to the MSB.

#### 3.2 Progress towards project outputs

#### **Output 1: Capacity building**

Good progress has been made towards this output, with the three main elements substantially completed:

A seed conservation workshop was succesfully delivered in TCI in October 2013, hosted by DEMA., and involved participation by 16 individuals from the Caribbean UKOTs, building the skills required to effectively conserve seeds. The workshop covered a broad range of topics, including species targeting, assessing potential seed collections, making quality collections (including data and herbarium vouchers), post-harvest handling, cleaning seeds, seed storage. Additional training was provided to staff at NPT during joint field work in March 2014; and will be provided to staff in Montserrat and Anguilla during the course of 2014. The MSB continues to provide technical support where queries arise.

All five Caribbean UKOTs are equipped to collect and process seeds, with all five partners collecting into MSB-supplied cotton and paper bags and drying seeds using a system based on silica gel in a polypropylene drum. Seeds are being cleaned using high-quality laboratory sieves and stored in tri-laminate foil bags sealed with plastic clips. Permanent sealing will be done with constant-heat sealers, once these are available from the supplier. CDoE and NPT have freezers in place for storing seed long-term, while MDoE, ADoE and DEMA yet to install freezers whilst a dedicated space is arranged for them. Herbarium vouchers are pressed and dried in a herbarium press. Some equipment was already available with partners from previous project work, with gaps filled as a result of this project.

Information on identification and localities of priority species is available to collectors, via the OTEP-funded UKOTs online herbarium (<a href="http://herbaria.plants.ox.ac.uk/bol/ukot">http://herbaria.plants.ox.ac.uk/bol/ukot</a>), where a substantial amount of plant specimen data is available to query, including with more information to be uploaded in the coming months. It is expected that this will be very important in targeting

the highest priority species, providing information on where plants have been found in the past, as well as specimen and field images. Nevertheless, additional work will be undertaken to supplement this, presenting data and additional images from other sources in printed format so that seed collectors have information readily accesible to help plan and undertake field work.

Indicators of the progress of achieving this output include:

16 participants attended the workshop, with at least two from each Caribbean UKOT, three from Cayman and seven from TCI. See Annex 5 for workshop reports and press release from Anguilla DoE.

Partners from all five Caribbean UKOTs now active in seed conservation, putting skills learnt at the workshop and other training opportunities into action, with a seed collecting programme now established in each Territory. A Google Group for Caribbean UKOTs Seed Conservation has been set up as a forum for members to share information is active (https://drive.google.com/file/d/0B9U7YpPN14zXdIYxV3dQVC1qT3M/edit?usp=sharing).

53% of new collections from species scored 4 or above, based solely on whether they are new to the MSBP and their range. Another 15% of collections are awaiting identification. The priority list is yet to adequately incorporate local priorities identified by individual partners. It is anticipated that the proportion of collections scoring 4 or above will increase, with the aim of reaching the 75% target by the close of the project. This will be achieved through providing support in targeting information, as well as joint field work with Kew during the course of 2014.

Collections made for this project have yet to be processed at the MSB, so figures for seed numbers are not yet available.

127 existing duplicate collections held at the MSB are almost all ready to be repatriated, pending inspection and issuing of phytosanitary certificates by FERA. The remainder of the 216 target are held at the MSB under an agreement with the TCI National Trust, who are not currently engaged with the project. We are exploring the possibility of having these collections repatriated into the care of DEMA.

See Annex 7 for a list of Caribbean seed accessions in-country and at the MSB.

#### **Output 2: Collecting programme**

Good progress has been made towards this output, with collecting underway in all five partner Territories. The remainder of this project will be largely occupied with continuing progress with the collecting programme.

As previously discussed, a priority list of species to target for seed conservation has been drawn up, with scoring based on the extent of species' ranges and whether they are already represented in MSBP accessions. Partners in Montserrat, BVI, Anguilla and Cayman have provided information for further refinement of this list, but this needs to be incorporated.

98 seed collections are in the process of being conserved for this project, with most now duplicated at the MSB, with processing underway. 63 of these collections have been made since July 2013, with another 35 seed collections in the months prior to July 2013, using cofunding made available for this project.

Indicators of the progress of achieving this output include:

98 new seed collections conserved for this project, 57 of these currently banked in-country and 82 accessioned at the MSB. A number of these collections will be split and repatriated once processed at the MSB so that almost all collections will be held in duplicate at the MSB and the country of origin.

53% of new collections from species scored 4 or above. See indicator under Output 1, above.

Approximately 40 species have been collected that have not been previously represented in the MSBP. Analysis of species intake figures for the MSBP for the 2013/14 financial year have yet to be completed, so this figure needs to be confirmed. The figure is also subject to change as the identification of herbarium vouchers is verified at Kew's Herbarium. Reaching the 150

species new to the MSBP target is achievable though, like the target of 75% of collections from priority species, relies on effective identification and targeting in the field. Support from Kew will help in achieving this.

See Annexes 6 (Priority lists), 7 (Seed accessions), 8 (Field reports) for evidence of the indicators referred to above.

#### 3.3 Progress towards the project Purpose/Outcome

Good progress is being made towards the project outcome, with native plant species of the Caribbean UKOTs already effectively conserved *ex-situ* through seed banking, achieved through the building of capacity of project partners. Some collections of priority species are now available as a supply of material for *in-situ* conservation projects and native plant nurseries in the UKOTs, with duplicates stored at the MSB. These include a number of species endemic to the UKOTs, as well as others of local value.

Nevertheless, much of the time to complete the collecting programme remains. With continued support from Kew to build capacity, the indicators remain achievable by the end of the funding, with the result that the future of the UKOTs' plant diversity will be more secure.

### 3.4 Goal/ Impact: achievement of positive impact on biodiversity and poverty alleviation

The goal of the project is to provide a more secure future for the UKOTs' plant diversity. At its most basic level, this project is contributing to this goal by ensuring that the species collected and banked are much less likely to suffer extinction whilst there are viable seeds in secure storage. However, it is anticipated that the project will have an impact on other forms of *ex-situ* conservation in the UKOTs, by being a source of material for native plant nurseries and other horticultural activities. It also has the potential to contribute to *in-situ* conservation by providing material for habitat restoration and reintroduction programmes. By being available to researchers, the project will help to advance our understanding of plant biology in a variety of disciplines, such as seed studies, plant propagation, and population genetics, which in turns can have impacts on the conservation of biodiveristy.

#### 4. Project support to the Conventions (CBD, CMS and/or CITES)

This project supports the contribution of partner countries to the CBD in a variety of ways. In particular, it supports Article 9 (and Targets 8 and 15 of the GSPC), sections (a) and (b), by establishing facilities for seed conservation in-country, as well as implementing a seed collecting programme:

- "(a) Adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components;
- (b) Establish and maintain facilities for ex-situ conservation of and research on plants, animals and micro- organisms, preferably in the country of origin of genetic resources"

The establishment of local seed banks also places partners of this project in a better position to contribute to section (c) of Article 9, by enabling them to provide a ready supply of material for use in plant reintroduction programmes; and section (d), as a source of plant material that might otherwise be sourced from the wild by third parties in an unregulated manner, such as plants of threatened species for horticulture:

- "(c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;
- (d) Regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten ecosystems and in-situ populations of species"

The list of seed collections banked in-country and at the MSB (Annex 7) are verifiable indicators of progress towards these obligations.

The project also contributes to Article 12 (and Target 15 of the GSPC) by including a programme of training in "measures for the identification, conservation and sustainable use of biological diversity". See reports relating to the training workshop and training delivered during joint field work in BVI for evidence of this (Annexes 5 and 8).

Article 15 is also of relevance in this context, whereby access to genetic resources for research, conservation and education is facilitated through the duplication of seed material to the MSB in the UK, under the terms of Memoranda of Collaboration between Kew and each of the five UKOT partners. These agreements, framed by the CBD, are enabling research to be undertaken on UKOTs plants at Kew and, where the terms of the individual agreement allow, material made available to third parties for non-commercial use. It will be possible to provide evidence of such access through the visibility of UKOT collections available on the MSBP's seed list (<a href="http://apps.kew.org/seedlist/">http://apps.kew.org/seedlist/</a>).

Much exchange of information (Article 17 of the CBD) is taking place as part of this project, with Kew providing the basis of the priority species list (Annex 6), as well as promoting the use of the UKOTs online herbarium (<a href="http://herbaria.plants.ox.ac.uk/bol/UKOT">http://herbaria.plants.ox.ac.uk/bol/UKOT</a>), and the technical resources of the MSBP. Data will also be repatriated along with seed collections from the MSB. Each seed collection duplicated at the MSB (Annex 7) is accompanied with field data and a herbarium voucher.

By securing threatened species in ex-situ collections, this project is contributing to Aichi target 12:

"By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained."

#### 5. Project support to poverty alleviation

Though this project is not aiming to support poverty alleviation directly, the higher impacts it is aiming to achieve on biodiversity conservation are of relevance to the economies of the Territories in which it is operating. Tourism is a major part of the economies of all of the Caribbean UKOTs. The natural environment is key to attracting visitors to the islands, as well as being vital in providing other ecosystem services, such as hydrology and erosion control. Seed conservation has an important role to play in habitat restoration, which is an important measure in protecting and helping our natural environment. An example of where the project is likely to have an impact is the development of the Queen Elizabeth II Park in Tortola, managed by NPT, who are seeking to landscape the park with native plants. The kinds of plants desired is directly informing which species being targeted for banking locally, and thus a specific use for the seeds has already been identified.

#### 6. Monitoring, evaluation and lessons

The success of the project is largely measured by the number and quality of seed collections effectively conserved in-country and duplicated at the MSB, as an indicator of capacity built and the effectiveness of the collecting programme. This is a relatively objective indicator that is straight-forward to monitor, as accessions are recorded on databases in-country and at the MSB. The detailed records kept at the MSB over the course of cleaning, testing and banking of seed accessions allow the quality of collected material to be assessed and monitored with relative ease, though there can be some delay before data is available.

The agreeing of a priority list for targeted collection is another tool by which progress is monitored, allowing for lists of collections made to be referred back to gauge how successful the programme has been at conserving the highest priorities, such as those under greatest threat of extinction and those not yet represented in *ex-situ* collections.

The drafting of a priority list has proven to be a much bigger task than originally anticipated, with no complete checklist for the Caribbean UKOTs yet available, particularly with reliable information on distribution and native status. The project will continue to refine the priority list as more data can be added.

#### 7. Actions taken in response to previous reviews (if applicable)

N/A

#### 8. Other comments on progress not covered elsewhere

The design of the project has not been modified in any way. The main risk to the project is the climate affecting the availability of seeds (suchas an unusually dry year), or hurricanes interfering with field work. The wide distribution of UKOTs involved will hopefully mean that it is unlikely that all will be affected by such risks simultaneously.

#### 9. Sustainability

The project has gained a profile across several of the Caribbean UKOTs through promotion via various media.

In Anguilla, attendance of ADoE staff at the seed conservation workshop in TCI was announced in a press release (Annex 5c), and the workshop formed the basis of a blog post on the Kew website (<a href="http://www.kew.org/discover/blogs/seed-conservation-caribbean-uk-overseas-territories">http://www.kew.org/discover/blogs/seed-conservation-caribbean-uk-overseas-territories</a>).

The prospect of the project was promoted during a radio interview with the project leader on ZJB in Montserrat in June 2013. The interview is said to have been repeated several times on that station.

During joint field work in BVI, a press event was organised to promote this project and DPLUS016, running concurrently with in BVI (Annex 8e). The Governor of BVI, His Excellency Boyd McCleary, attended, and also came out into the field to see our work. He showed great interest in the project work, and tweeted his experiences via his Twitter feed, <a href="https://twitter.com/GovernorBVI">https://twitter.com/GovernorBVI</a>. The field work was also publicised via the Kew UKOTs team's twitter feed (Annex 8d).

The project is intended to have long-term impact, with seed being stored in-country and at the MSB for many dozens of years, with relatively low maintenance. However, real sustainability would see the seed collections continue to grow beyond the lifetime of this project. Kew's relationship with UKOT partners is on-going, with work on developing *ex-situ* collections in the UKOTs expected to continue into the future. All partners have a commitment to protect the plant life of the UKOTs, and the design of the project is intended so that seed banking incountry is embedded as a convenient tool to easily be used alongside other plant conservation activities. An example of where partners have taken action that displays a commitment to sustainability is at NPT in BVI, who have recently recruited Natasha Harrigan, a plant conservation officer responsible for developing and caring for *ex-situ* plant collections at the J.R. O'Neal Botanic Garden in Tortola, including their seed bank.

#### 10. Darwin Identity

The Darwin Initiative has been promoted as the principal funder of this project at every opportunity (see above and Annexes for examples of project promotion). The Darwin Initiative is a familiar programme in the Caribbean UKOTs, where several projects across all Territories have received support from Darwin, and biodiversity conservation and the natural environment enjoys a reasonable level of media attention.

#### 11. Project Expenditure

Table 1 project expenditure during the reporting period (1 April 2013 – 31 March 2014)

| Project spend since       | 2013/14      | 2013/14                             | Variance | Comments  |
|---------------------------|--------------|-------------------------------------|----------|---|
| last annual report        | Grant<br>(£) | Total actual<br>Darwin<br>Costs (£) | %        | (please explain significant variances)  |
| Staff costs (see below)   |              |                                     |          | Actual costs includes £2614 transferred to partners in Anguilla and £2614 transferred to partners in Montserrat, not yet spent.   |
| Consultancy costs         |              |                                     |          |   |
| Overhead Costs            |              |                                     |          |   |
| Travel and subsistence    |              |                                     |          | £1500 budgeted for vehicle hire erroneously put unde operating costs. Actual costs includes £1875 transferred to Anguilla and £1963 transferred to Montserrat, not yet spent. |
| Operating Costs           |              |                                     |          | See above   |
| Capital items (see below) |              |                                     |          | US supplier of heat<br>sealers not able to<br>fulfil order for heat<br>sealers before end o<br>financial year   |
| Others (see below)        |              |                                     |          |   |
| TOTAL                     | 39113        | 37025.56                            |          |   |

<sup>\*</sup>Includes virement of £3200 from Capital items to T&S, approved by email from LTS 3/3/14

# 12. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section.

The first three quarters of this project (since July 2013) have seen good progress, the main landmark of which has been the gathering in October 2013 of 16 counterparts from all five of the Caribbean UK Overseas Territorties in the Turks and Caicos Islands for a five-day workshop in Seed Conservation. The workshop was an opportunity for participants to learn the skills necessary to collect, process and bank seeds native plant species. It was also an opportunity for project partners, most of whom had not met before, to share experiences in plant conservation.

Also noteworthy are some of the collections banked for the project, including a number of plants endemic to the UKOTs and never before represented in *ex-situ* seed banks. These

| caymanensis, | andrium carolinae, endemic to the and and coccothrinax and Senna and Senna | proctorii, endemic to Caym | an; <i>Machaonia</i> |
|--------------|--|----------------------------|----------------------|
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Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2013-2014

| Project summary   | Measurable Indicators                          | Progress and Achievements April 2013 - March 2014   | Actions required/planned for next period  |
|---|--|---|---|
| Goal/Impact   |  | Not applicable  |   |
| Not applicable – not part of original prop  | oosal  |   |   |
| Purpose/Outcome Native plant species of the Caribbean UK Overseas Territories (UKOTs) effectively conserved ex-situ through seed banking. High quality collections of priority species available as a supply of material for in-situ conservation projects and native plant nurseries in the UKOTs, with duplicates stored at the Millennium Seed Bank for long-term security. Local capacity to undertake plant conservation measures improved. As a result, the future of the UKOTs' plant diversity (and thus the foundation of the islands' green economies) will be more secure. | Not applicable – not part of original proposal | Some native plant species of the Caribbean UKOTs already effectively conserved ex-situ through seed banking, achieved through the building of capacity of project partners. Some collections of priority species are now available as a supply of material for in-situ conservation projects and native plant nurseries in the UKOTs, with duplicates stored at the MSB. These include a number of species endemic to the UKOTs, as well as others of local value. Nevertheless, much of the time to complete the collecting programme remains. With continued support from Kew to build capacity, the indicators remain achievable by the end of the funding, with the result that the future of the UKOTs' plant diversity will be more secure. | Continue collecting programme, supported by joint field work with Kew staff.  Existing duplicate collections at the MSB will be repatriated to the country of origin. |
| Output 1.   | 10 participants trained, two from each UKOT.   | 16 participants attended to workshop plus one extra from Cayman, and sev  |   |
| Capacity building:  | 0.001.   | Partners from all five Caribbean UKC  | ' '   |

| Workshop participants from all 5 Caribbean UKOTs trained in seed conservation skills, including targeting, collecting, processing and banking.  All 5 Caribbean UKOTs equipped to collect, process and bank seed.  Information on identification and localities of priority species available to collectors. | Caribbean UKOTs seed conservation network active.  Seed collecting programme underway in all 5 Caribbean OTs.  75% of new collections from priority species.  75% of new collections of 500 or more seeds.  216 existing duplicate collections available at MSB repatriated to seed banks in country of origin (TCI, Cayman, Montserrat). | putting skills learnt at the workshop and other training opportunities into action. 16 members of the Caribbean Seed Conservation Google Group, where members are able to share information.  Seed collecting programme underway in all five Caribbean UKOTs 53% of new collections from species scored 4 or above, based solely on whether they are new to the MSBP and their range. Another 15% of collections are awaiting identification. The priority list is yet to adequately incorporate local priorities identified by individual parters.  Collections made for this project have yet to be processed at the MSB, so figures for seed numbers are not yet available.  127 existing duplicate collections almost all ready to be repatriated. The remainder of the 216 target are held at the MSB under an agreement with the TCI National Trust, who are not currently engaged with the project. We are exploring the possibility of having these collections repatriated into the care of DEMA. |  |
|--|---|--|--|
| Activity 1.1 Deliver training during a set Turks and Caicos Islands, though lec covering seed collecting, processing,  | tures and practical example,  | Workshop successfully completed. Additional training will be delivered during joint fieldwork.   |  |
| Activity 1.2, Explore and share ideas for species for targeted collections, with   |   | Prioritisation of species discussed at workshop and during visit to BVI.   |  |
| Activity 1.3 Review equipment already conservation (e.g. supplies previously   |   | Completed. Will continue to monitor need for equipment and consumables.  |  |
| Activity 1.4 Procure equipment require   | ed for seed banking   | Almost all equipment now in place, with freezers for three partners still to be purchased (funds in place), and heat sealers on order with US supplier.  |  |
| Activity 1.5 Repatriate duplicate collections and data stored at MSB   |   | 128 duplicate collections almost all ready to be repatriated. Will be shipped within the next quarter.   |  |
| Output 2.  |   |  |  |
| Seed collecting programme:   | 250 new seed collections available for use in local seed banks and  | 98 new seed collections banked: 57 collections available for use in-country, 82 accessioned at MSB   |  |
| Priority list of species to target for seed conservation agreed for all 5 Caribbean UKOTs.   | duplicated at MSB.  75% of new collections from priority species.   | 53% of new collections from species scored 4 or above, based solely on whether they are new to the MSBP and their range. Another 15% of collections are awaiting identification. The priority list is yet to adequately  |  |

| Collections of native plant species collected, processed and banked.  | 150 species banked not previously represented in MSBP seed banks. | incorporate other factors, such as value in habitat restoration, landscaping or local use.  Approximately 40 species have been collected that have not been previously represented in the MSBP   |  |  |
|---|---|--|--|--|
| Activity 2.1. UKOTs to draw up priority Kew.  | lists of species, with assistance from                            | Priority list drawn up. Needs some refinement, inlcluding better incorporation of local priorities.  |  |  |
| Activity 2.2. Collate data on target species, including localities, phenology, identification to plan collecting programme. |   | Data available on UKOTs Online Herbarium, with more data to be added soon. Additional supporting information, such as plant images to be compiled where needed.  |  |  |
| Activity 2.3 Scout for target populations   | S.  | Ongoing  |  |  |
| Activity 2.4 Make seed collections, fully documented with herbarium vouchers.   |   | 98 seed collections made (35 of these using cofunding in the months prior to July 2013), most with herbarium vouchers. Some situations where a voucher is not appropriate and a photo is taken for verification. Seed collecting continues for remainder of project. |  |  |
| Activity 2.5 Dry, clean and bank seeds.   |   | Ongoing  |  |  |
| Activity 2.6 Ship duplicate collections to MSB.   |   | 79 collections shipped to MSB, including 3 still to be accessioned.  |  |  |

#### Annex 2 Project's full current logframe

Full logframe not required in original application. Sections 19-30 reproduced here.

#### **Project Details**

#### 12.1

19. Project Outcome Statement: Describe what the project aims to achieve and what will change as a result. (100 words max)

Native plant species of the Caribbean UK Overseas Territories (UKOTs) effectively conserved *ex-situ* through seed banking. High quality collections of priority species available as a supply of material for *in-situ* conservation projects and native plant nurseries in the UKOTs, with duplicates stored at the Millennium Seed Bank for long-term security. Local capacity to undertake plant conservation measures improved. As a result, the future of the UKOTs' plant diversity (and thus the foundation of the islands' green economies) will be more secure.

**20. Background:** (What is the current situation and the problem that the project will address? How will it address this problem? What key themes will it address? (200 words max)

The five Caribbean UKOTs are part of the Caribbean 'biodiversity hotspot' sensu Myers et al 2000, an international conservation priority. The main threats to the plant diversity are habitat loss and fragmentation and the spread of alien invasive species. Much of the destruction of native habitats is driven by development, e.g. the rapid proliferation of tourist resorts, road-building, urban developments. Many alien species are being introduced through the horticultural trade, threatening native vegetation. Climate change in the Caribbean is predicted to have increasing impacts.

Tourism is a major part of the economies of all of the Caribbean UKOTs. The natural environment is key to attracting visitors to the islands, as well as being vital in providing other ecosystem services, such as hydrology and erosion control.

In addition to being a valuable long-term 'insurance policy' against extinction, seed banks can support other conservation activities such as habitat restoration and landscaping with native species. The MSB holds 281 seed collections from the Caribbean UKOTs, none are banked locally. While some species are also represented in *ex-situ* collections (e.g. Kew and locally) as cultivated plants, these represent a small proportion of the threatened plant diversity of the UKOTs.

21. Methodology: Describe the methods and approach you will use to achieve your intended outcomes and impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc). Give details of

#### any innovative techniques or methods. (500 words max)

#### Overall approach

Combining established best practice in seed conservation developed by the Millennium Seed Bank Partnership with the cumulative expertise and data of Kew's UKOTs Science Team to enable partners in-country to meet agreed plant conservation priorities.

#### Training

Key to the project will be to boost the expertise of local partners in seed conservation, where there are varying levels of basic skills currently. The project will include a workshop, hosted in the Turks and Caicos Islands, bringing together participants from across the Caribbean UKOTs. 10 participants will be trained in identifying and targeting species and populations, collecting, processing and banking seeds. Approaches to prioritising species will be agreed, and the benefits of seed banking to local plant conservation, including the use of collections, will be explored. This will be backed-up by the development of a Caribbean UKOTs seed conservation network, to deliver support and share expertise.

#### Species prioritisation

Each UKOT will draw up a list of species to be prioritised according to a variety of criteria, e.g. level of extinction threat, range, species useful in habitat restoration, native species landscaping, useful/economically valuable species. Opportunity for cross-UKOT collaboration in strategic planning. Kew's work on identifying conservation priorities through its OTEP-funded online herbarium and Red Listing activities (<a href="http://herbaria.plants.ox.ac.uk/bol/ukot">http://herbaria.plants.ox.ac.uk/bol/ukot</a>) will help to inform this process.

#### Seed banks

Equip participating UKOTs to collect, process and bank seeds locally, where necessary equipment is currently lacking. The experience of the MSBP in developing countries means that effective yet low-cost solutions to seed banking are available.

Duplicate seed collections from the Cayman Islands, Turks and Caicos Islands, Montserrat and British Virgin Islands at the MSB ready for repatriation sent back to the country of origin for storing in local seed banks.

#### Collecting programmes

Designated staff across the Caribbean UKOTs to undertake a programme of targeted collecting, focusing on species identified as part of the species prioritisation exercise, following the established collecting protocols developed by the MSBP across its global network.

#### Management

Kew will coordinate the overall project to ensure successful delivery of outputs and will provide technical expertise, data and training. Local partners will manage in-country prioritisation, collecting and banking activities.

#### 22. How does this project:

- a) Deliver against the priority issues identified in the assessment criteria
- b) Demonstrate technical excellence in its delivery
- c) Demonstrate a clear pathway to impact in the OT(s)

(500 words max)

- a) The project will be able to demonstrate clear and measurable outcomes in terms of the number of people trained, the number of local seed banks established and the number of priority species secured in *ex-situ* collections in the UKOTs and duplicated at the MSB, both for long term conservation and strengthening of habitat restoration activities. In so doing, it will also contribute to: achieving the commitment of the MSBP to secure 25% of the global seed-bearing flora in seed banks; commitments of the CBD, <u>Art.9</u> especially, but also <u>Art.12</u>, <u>15</u>, <u>17</u> and <u>18</u>; and directly to target 8 and 15 of the GSPC and <u>Aichi target 12</u>. By providing support in the form of a cross-UKOT workshop in seed conservation, this project would be aligned with the UKOT Biodiversity Strategy's commitments to improve communication and engagement in conservation of biodiversity across the OTs. With regard to the UKOT Environment Charters, the project will contribute to commitments of the UK to help build capacity, promote better cooperation between UKOTs and the use of UK expertise; as well as OT commitments to ensure the protection of key species and strengthen capacity to restore key habitats, and promote sustainable patterns of production.
- b) The project will contribute to embedding good environmental decision making by flagging up priority species for ex-situ conservation as well exploring possible future uses for the seeds and using this to inform collecting protocols. With local seed banking and duplication at the MSB, the role of seed banking can be included in future Species Action Plans and Habitat Management Plans. The planning of the project has drawn on the experience of the MSBP in managing and successfully completing seed conservation projects internationally (in over 50 countries), where the target of banking 10% of the world's seed bearing flora (over 24,000 species) was successfully met by 2010; as well as Kew's experience of collaborating on projects with UKOTs and other countries in the region. We therefore feel that the activities are practical and achievable, and that we recognise the principle risks.
- c) The success of the project depends on the commitment of local partners to setting priorities, collecting and banking native species. Partners from all 5 Caribbean UKOTs desire to secure the future of more of their threatened species and have the capacity to store and use seeds locally, through the project. Cayman, Turks and Caicos Islands, British Virgin Islands and Montserrat have all engaged with the MSBP in the past through joint field work and collecting programmes, while partners in Anguilla recognise the valuable role seed conservation will play as part of their conservation priorities. None wishes to see any of their native species suffer the same fate as *Nesiota elliptica*, a St Helenan endemic which, despite conservation efforts, became extinct in 2004 with no seed in *ex-situ* collections.

**23.** Who are the **stakeholders** for this project and how have they been consulted (include local or host government support/engagement where relevant)? Briefly describe what support they will provide and how the project will engage with them. (250 words max)

Almost all the Caribbean UKOTs have had some collaboration with the MSBP over the last 10 years (see section 24, below), cited as an example of a conservation activity in the 2012 White Paper on the Overseas Territories. However, no UKOT is yet banking seed locally, and many priority species have yet to be included in *ex-situ* seed collections, including some 29 species endemic to the Caribbean UKOTs, and many more restricted to the Caribbean.

Our principle partners in four of the UKOTs (Cayman, Turks and Caicos Islands, Montserrat and Anguilla) are local government departments, while in the British Virgin Islands we are working with the National Parks Trust (see section 24, below). All have responsibilities for biodiversity conservation in their respective countries and are long-standing collaborators with Kew, with Memoranda of Collaboration in place with Cayman Department of Environment and the Turks and Caicos Department of Environment and Maritime Affairs. All have been consulted on the project and have expressed their support. They will be responsible for managing their local seed banks as well as undertaking targeted seed collecting programmes with assistance from Kew.

Montserrat National Trust, Cayman Islands National Trust and the Cayman Blue Iguana Recovery Program are all local partners with an interest in plant conservation and have participated in joint seed collecting field work, as well as potential 'customers' of a seed bank.

Local land owners – access to field sites required. In many cases, land is owned by government or National Trust, with whom we are working.

**24. Institutional Capacity:** Describe the implementing organisation's capacity (and that of partner organisations where relevant) to deliver the project. (500 words max)

Kew's mission is 'to inspire and deliver science-based plant conservation worldwide, enhancing the quality of life'. RBG Kew's UKOTs Science Team has well-established links with all of the Caribbean UKOTs, having collaborated with all UKOTs on plant conservation projects, providing technical support in plant identification, habitat surveying & GIS, management plans and horticultural expertise. Kew's Seed Conservation Department is the world leader in the field, managing the extensive Millennium Seed Bank Partnership, and is well experienced in capacity building and technology transfer, with partners in over 50 countries. To date it has secured over 30,000 species in the vaults of the MSB. RBG Kew will provide overall project coordination, liaising with UKOTs for the workshop and prioritisation exercise, as well as providing training and technical support, including in species targeting and plant identification. Collections will also be duplicated at the MSB in the UK.

British Virgin Islands: Responsible for the management of 21 protected areas, the **National Parks Trust** is well placed to make collections of priority species from across the islands, as well as manage the storage and use of collections at the J.R. O'Neil Botanic Gardens. Previous collaboration has resulted in 47 collections banked at the MSB. Recent joint field work led to one member of staff being trained in seed collecting and basic processing, with participation from other members of staff. NPT are already equipped to collect and process seed for shipping to the MSB, but not to store seed locally. Montserrat: The **Ministry of Agriculture Trade Lands Housing and Environment** is another long established collaborator with Kew. The Environment Department is well placed to undertake a seed collecting programme, with staff experienced in working in the field in key habitats. Previous joint field work to collect seeds has resulted in 27 seed collections banked at the MSB, all with duplicates available for repatriation, as well as three members of staff who have participated in seed collecting.

<u>Turks and Caicos</u> Islands: The Turks and Caicos Islands have had the greatest engagement with the MSBP, latterly through the **Department of Environment and Maritime Affairs**, with over 180 seed collections at the MSB, most with duplicate collections available for repatriation. Staff at DEMA are familiar with the native flora as well as experienced in making seed collections. DEMA is equipped to make and process collections, but not yet banking seed locally. A local seed bank will make a valuable complement to DEMA's existing Native Plant Biodiversity Conservation Nursery.

<u>Cayman</u>: The **Department of Environment**, along with staff at the Blue Iguana Recovery Program and National Trust have recently received basic seed collecting training. Our local counterparts are familiar with the native flora and field conditions and are equipped with seed collecting and processing

Anguilla: Active in nature conservation in Anguilla, the **Department of Environment** is well placed to set conservation priorities as well as undertake a collecting programme. Participating in seed conservation will be of importance in executing Species Action Plans and a well-timed complement to pending environmental legislation and other conservation activities.

equipment, but not yet banking locally.

| 25. Expected Outputs  |   |   |   |
|---|---|---|---|
| Output (what will be achieved e.g. capacity building, action plan produced, alien species controlled)   | Indicators of success (how we will know if its been achieved e.g. number of people trained/ trees planted)  | Status before project/baseline data (what is the situation before the project starts?)  | Source of information (where will you obtain the information to demonstrate if the indicator has been achieved?)                                    |
| 1. Capacity building:  Workshop participants from all 5 Caribbean UKOTs trained in seed conservation skills, including targeting, collecting, processing and banking.  All 5 Caribbean UKOTs equipped to collect, process and bank seed.  Information on identification and localities of priority species available to collectors. | 10 participants trained, two from each UKOT.  Caribbean UKOTs seed conservation network active.  Seed collecting programme underway in all 5 Caribbean OTs.  75% of new collections from priority species.  75% of new collections of 500 or more seeds.  216 existing duplicate collections available at MSB repatriated to seed banks in country of origin (TCI, Cayman, Montserrat). | TCI – two staff members trained and experienced seed collectors, several other staff previously participated in seed collecting training.  Cayman – three staff trained in seed collecting.  BVI – one staff member trained, with some participation by others.  Montserrat – three staff members participated in joint field work with some collecting training in the last five years.  Anguilla – no staff trained in seed conservation to date.  No local counterparts have been fully trained in seed processing or banking.  TCI, Cayman and BVI – already equipped with basic drying drum, hygrometer, collecting bags and sieves; sufficient to make collections to ship to MSB, but not bank locally.  Some data available to partners via UKOTs online herbarium, but not formatted to aid targeting of seed collecting. Aids to field identification | Workshop report and feedback.  Local seed lists and MSB Seed Bank Database.  Priority species lists.  Publicity, e.g. newspaper reports, web pages. |

|   |  | not available in all UKOTs.                                |   |
|---|--|--|---|
| Seed collecting programme:  | 250 new seed collections available for use in local seed banks and | TCI and Cayman – ongoing collecting programme prioritising | Workshop report and feedback.                 |
| Priority list of species to target for seed conservation agreed for all 5 | duplicated at MSB.   | endemics and working to fill gaps in MSB Base List.        | Local seed lists and MSB Seed Bank Database.  |
| Caribbean UKOTs.  | 75% of new collections from priority species.                      | 281 collections (representing 217                          | Priority species lists.                       |
| Collections of native plant species collected, processed and banked.      | 150 species banked not previously represented in MSBP seed banks.  | species) banked at the MSB, none held locally.             | Publicity, e.g. newspaper reports, web pages. |

#### 26. Expected Outcomes: How will each of the outputs contribute to the overall outcome of the project? (100 words max)

Output 1 ensures that the Caribbean UKOTs have the skills and equipment necessary to bank species in-country for the first time. It will also facilitate coordinated efforts to prioritise species for banking, as well as providing an opportunity for UKOTs to share and develop ideas for making use of local seed banks.

Output 2 ensures that partners will collect and bank priority species, thus significantly increasing the number of UKOTs species safeguarded. The availability of banked seed will also significantly strengthen habitat restoration activities in the region for many years to come.

| 27. Main Activities |   |
|---------------------|---|
| Output 1            | Activities or tasks to be done to deliver the outputs. Include activities on information sharing and collaboration with other UKOTs   |
| 1.1                 | Deliver training during a seed conservation workshop in the Turks and Caicos Islands, though lectures and practical example, covering seed collecting, processing, banking, prioritising and targeting. |
| 1.2                 | Explore and share ideas for coordinated prioritisation of species for targeted collections, with end uses for seeds discussed.  |
| 1.3                 | Review equipment already available in UKOTs for seed conservation (e.g. supplies previously provided by MSBP)   |

| 1.4      | Procure equipment required for seed banking   |
|----------|---|
| 1.5      | Repatriate duplicate collections and data stored at MSB   |
| Output 2 |   |
| 2.1      | UKOTs to draw up priority lists of species, with assistance from Kew.   |
| 2.2      | Collate data on target species, including localities, phenology, identification to plan collecting programme. |
| 2.3      | Scout for target populations.   |
| 2.4      | Make seed collections, fully documented with herbarium vouchers.  |
| 2.5      | Dry, clean and bank seeds.  |
| 2.6      | Ship duplicate collections to MSB.  |

| 28. Risks   |  |  |   |
|---|--|--|---|
| Description of the risk   | Likelihood the<br>event will happen<br>(H/M/L) | Impact of the event on the project (H/M/L) | Steps the project will take to reduce or manage the risk  |
| Hurricane season disrupting workshop  | M  | L  | Workshop to be scheduled outside hurricane season.  |
| Severe hurricane damage limiting collecting activities through impact on infrastructure or vegetation | L  | L  | Severe damage very unlikely to affect more than one UKOT. Project activities spread across several UKOTs.   |
| Hurricane damage leading to flooding/loss of power to seed bank freezers.                             | M  | M  | Local partners to house seed bank in best available location, with each to develop an action plan in the event of disaster to secure collections. Seed collections duplicated in the MSB. |
| Poor fruiting season limiting collecting activities   | L  | Н  | With collecting activities undertaken throughout the year, poor fruiting unlikely to be an issue over several seasons and UKOTs.  |
| Staff changes in Montserrat prevents full engagement with project                                     | М  | M  | Also engage with Montserrat National Trust to deliver outputs.  |

29. Sustainability: How will the project ensure benefits are sustained after the project has come to a close? If the project requires ongoing maintenance or

monitoring, who will do this? (200 words max)

Local partners will be responsible for the upkeep of their seed banks, though at the most basic level this amounts to the cost of running a freezer and general housekeeping. However, the project aims to embed seed banking as a resource for conservation activities in the long term, thus encouraging the collections to be developed as a response to the needs of local plant conservation projects. This will be facilitated by seed conservation measures being included in Species Action Plans and Habitat Management Plans.

Where native plant nurseries exist, exploiting commercial markets for target species can also sustain activities in the long-term. Such markets include selling plants to local gardeners as well as to developers for landscaping new developments.

The MSBP has a long-term commitment to global seed-banking, beyond the current project deadline of 2020, and supporting plant sciences and conservation of the UKOTs is an integral part of Kew's statutory remit. If partners are unable to maintain their local seed banks, the MSBP has the capacity to store national seed collections on behalf of the UKOTs.

**30. Monitoring & Evaluation:** How will the project be monitored and who will be responsible? Will there be any independent assessment of progress and impact? When will this take place, and by whom?

(250 words max)

The project will be monitored through regular reporting by all partners to ensure that the project is delivered on time and within budget. Evaluation of progress will be possible through regular reference to the indicators and targets set out in the logframe, as well as feedback following the accessioning process at the MSB.

With the drawing-up of local priority lists, there will be collecting workplans for each partner to measure their own progress by.

Kew will manage the project adaptively, responding to progress by partners in each UKOT strategically, so that the overall objective may be achieved, taking into account the varying circumstances among UKOTs.

The project falls under the MSBP's Collecting and Network Support Section (CNS). Projects report to CNS quarterly and the CNS reports to the MSBP Departmental Management Team.

The project completion report is **due up to 3 months** after the project is over and is linked to the final payment.

#### **Annex 3 Standard Measures**

Table 1 Project Standard Output Measures

| Code No.          | Description  | Year<br>1 | Year<br>2 | Year<br>3 | Year<br>4 | Total<br>to | Number<br>planned    | Total planned      |
|-------------------|--|-----------|-----------|-----------|-----------|-------------|----------------------|--------------------|
|                   |  | Total     | Total     | Total     | Total     | date        | for reporting period | during the project |
| Established codes |  |           |           |           |           |             |                      |                    |
| 6A                | Number of people to<br>be trained – seed<br>conservation training<br>workshop                            | 16        |           |           |           | 16          |                      |                    |
| 6B                | Number of training<br>weeks – seed<br>conservation training<br>workshop                                  | 1         |           |           |           | 1           |                      |                    |
| 8                 | Weeks spent by UK project staff  | 5         |           |           |           | 5           |                      | 10                 |
| 10                | Photo sheets to help<br>with identification of<br>target species, for<br>Anguilla, Montserrat<br>and BVI |           |           |           |           |             |                      | 3                  |
| 12A               | Database for seed accessions at each local seed bank   |           |           |           |           |             |                      | 1                  |
| 13B               | Herbarium collections repatriated for local herbaria   |           |           |           |           |             |                      | 5                  |
| 15A               | Press release in<br>Anguilla   | 1         |           |           |           | 1           |                      |                    |
| 17A               | Caribbean UKOT<br>Seed Conservation<br>Google group<br>established                                       | 1         |           |           |           | 1           |                      |                    |
| 17B               | Caribbean UKOTs<br>partners to contribute<br>MSBP Data<br>Warehouse                                      | 1         |           |           |           | 1           |                      |                    |
| 19A               | Radio interview given<br>to ZJB Radio in<br>Montserrat   | 1         |           |           |           | 1           |                      |                    |
| 20                | Equipment supplied for banking seed incountry  | £2713     |           |           |           | £2713       |                      | £4800              |
| 21                | Local seed banks<br>established in<br>Anguilla, BVI,<br>Cayman, Montserrat,<br>TCI                       | 5         |           |           |           |             |                      |                    |
| 23                | Funding raised<br>through MSBP and<br>proportion of Kew  |           |           |           |           |             |                      |                    |

|  | Staff time |  |  |  |  |
|--|------------|--|--|--|--|
| New -<br>Project<br>specific<br>measures |            |  |  |  |  |

#### Table 2Publications

| Type                          | Detail                | Publishers   | Available from                | Cost £ |
|-------------------------------|-----------------------|--------------|-------------------------------|--------|
| (eg journals,<br>manual, CDs) | (title, author, year) | (name, city) | (eg contact address, website) |        |
|                               |                       |              |                               |        |
|                               |                       |              |                               |        |
|                               |                       |              |                               |        |

## Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

See attached folder.

#### **Checklist for submission**

|   | Check |
|---|-------|
| Is the report less than 10MB? If so, please email to <a href="mailto:Darwin-Projects@Itsi.co.uk">Darwin-Projects@Itsi.co.uk</a> putting the project number in the Subject line.   |       |
| Is your report more than 10MB? If so, please discuss with <a href="mailto:Darwin-">Darwin-</a> <a href="mailto:Projects@ltsi.co.uk">Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line. | Х     |
| <b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.   | х     |
| Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.  |       |
| Have you involved your partners in preparation of the report and named the main contributors  | Х     |
| Have you completed the Project Expenditure table fully?   | х     |
| Do not include claim forms or other communications with this report.  | 1     |